

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/359,300

DATE: 10/19/2000

TIME: 12:02:21

Input Set : A:\PTO.txt

Output Set: N:\CRF3\10192000\I359300.raw

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OCT 23 2000

TECH CENTER 1600/2900

4 <110> APPLICANT: KUMAGAI, Monto H.  
 5 DELLA-CIOPPA, Guy R.  
 6 ERWIN, Robert L.  
 7 McGEE, David R.  
 9 <120> TITLE OF INVENTION: METHOD OF DETERMINING THE PRESENCE OF A  
 10 TRAIT IN A PLANT BY TRANSFECTING A NUCLEIC ACID SEQUENCE OF  
 11 A NON-PLANT DONOR INTO A HOST PLANT IN A POSITIVE  
 12 ORIENTATION  
 14 <130> FILE REFERENCE: 008010137US07  
 16 <140> CURRENT APPLICATION NUMBER: 09/359,300  
 17 <141> CURRENT FILING DATE: 1999-07-21  
 19 <160> NUMBER OF SEQ ID NOS: 60  
 21 <170> SOFTWARE: FastSEQ for Windows Version 3.0  
 23 <210> SEQ ID NO: 1  
 24 <211> LENGTH: 26  
 25 <212> TYPE: DNA  
 26 <213> ORGANISM: Tomato mosaic virus  
 28 <400> SEQUENCE: 1  
 29 ctcgcaaagt ttggaaccaa atcctc 26  
 31 <210> SEQ ID NO: 2  
 32 <211> LENGTH: 35  
 33 <212> TYPE: DNA  
 34 <213> ORGANISM: Tomato mosaic virus  
 36 <400> SEQUENCE: 2  
 37 cgggggtacct gggccccaac cgggggttcc ggggg 35  
 39 <210> SEQ ID NO: 3  
 40 <211> LENGTH: 41  
 41 <212> TYPE: DNA  
 42 <213> ORGANISM: Tomato mosaic virus  
 44 <400> SEQUENCE: 3  
 45 tctctgagcc taggctcgca aagtttcgaa ccaaatectc a 41  
 47 <210> SEQ ID NO: 4  
 48 <211> LENGTH: 35  
 49 <212> TYPE: DNA  
 50 <213> ORGANISM: Tomato mosaic virus  
 52 <400> SEQUENCE: 4  
 53 cgggggtacct gggccccaac cgggggttcc ggggg 35  
 55 <210> SEQ ID NO: 5  
 56 <211> LENGTH: 24  
 57 <212> TYPE: DNA  
 58 <213> ORGANISM: Tomato mosaic virus  
 60 <400> SEQUENCE: 5  
 61 tatgtatggt gcagaagaac agat 24  
 63 <210> SEQ ID NO: 6  
 64 <211> LENGTH: 24  
 65 <212> TYPE: DNA  
 66 <213> ORGANISM: Tomato mosaic virus

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68 <400> SEQUENCE: 6
69 agtcgactct tcctcttctg gcat 24
71 <210> SEQ ID NO: 7
72 <211> LENGTH: 30
73 <212> TYPE: DNA
74 <213> ORGANISM: Tomato mosaic virus
76 <400> SEQUENCE: 7
77 tgctcgagtg tgttcttcag tttctgtca 30
79 <210> SEQ ID NO: 8
80 <211> LENGTH: 30
81 <212> TYPE: DNA
82 <213> ORGANISM: Tomato mosaic virus
84 <400> SEQUENCE: 8
85 aactcgagcg ctttgatttc tccgaagctt 30
87 <210> SEQ ID NO: 9
88 <211> LENGTH: 114
89 <212> TYPE: DNA
90 <213> ORGANISM: Tomato mosaic virus
92 <220> FEATURE:
93 <221> NAME/KEY: CDS
94 <222> LOCATION: (28)...(114)
96 <400> SEQUENCE: 9
97 gttttaaata cgctcgaggt tttaaat atg tct gtt gcc ttg tta tgg gtt gtt 54
98 Met Ser Val Ala Leu Leu Trp Val Val
99 1 5
101 tct cct tgt gac gtc tca aat ggg aca agt ttc atg gaa tca gtc cgg 102
102 Ser Pro Cys Asp Val Ser Asn Gly Thr Ser Phe Met Glu Ser Val Arg
103 10 15 20 25
105 gag gga aac cgt 114
106 Glu Gly Asn Arg
110 <210> SEQ ID NO: 10
111 <211> LENGTH: 29
112 <212> TYPE: PRT
113 <213> ORGANISM: Tomato mosaic virus
115 <400> SEQUENCE: 10
116 Met Ser Val Ala Leu Leu Trp Val Val Ser Pro Cys Asp Val Ser Asn
117 1 5 10 15
118 Gly Thr Ser Phe Met Glu Ser Val Arg Glu Gly Asn Arg
119 20 25
121 <210> SEQ ID NO: 11
122 <211> LENGTH: 39
123 <212> TYPE: DNA
124 <213> ORGANISM: Nicotiana benthamiana
126 <400> SEQUENCE: 11
127 gcctcgagtg cagcatggaa acccttctaa agcttttcc 39
129 <210> SEQ ID NO: 12
130 <211> LENGTH: 36
131 <212> TYPE: DNA
132 <213> ORGANISM: Nicotiana benthamiana

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134 <400> SEQUENCE: 12
135 tccctaggtc aaaggctctc tattgctaga ttgccc 36
137 <210> SEQ ID NO: 13
138 <211> LENGTH: 111
139 <212> TYPE: DNA
140 <213> ORGANISM: Tobacco mosaic virus
142 <220> FEATURE:
143 <221> NAME/KEY: CDS
144 <222> LOCATION: (25)...(111)
146 <400> SEQUENCE: 13
147 gttttaaata cgctcgagtgc cagc atg gaa acc ctt cta aag cct ttt cca 51
148 Met Glu Thr Leu Leu Lys Pro Phe Pro
149 1 5
151 tct cct tta ctt tcc att cct act cct aac atg tat agt ttc aaa cac 99
152 Ser Pro Leu Leu Ser Ile Pro Thr Pro Asn Met Tyr Ser Phe Lys His
153 10 15 20 25
155 aac ttc act ttt 111
156 Asn Phe Thr Phe
160 <210> SEQ ID NO: 14
161 <211> LENGTH: 29
162 <212> TYPE: PRT
163 <213> ORGANISM: Tobacco mosaic virus
165 <400> SEQUENCE: 14
166 Met Glu Thr Leu Leu Lys Pro Phe Pro Ser Pro Leu Leu Ser Ile Pro
167 1 5 10 15
168 Thr Pro Asn Met Tyr Ser Phe Lys His Asn Phe Thr Phe
169 20 25
171 <210> SEQ ID NO: 15
172 <211> LENGTH: 44
173 <212> TYPE: DNA
174 <213> ORGANISM: Erwinia herbicola
176 <400> SEQUENCE: 15
177 ccaagcttct cgagtgcagc atgcagcaac cgccgctgct tgac 44
179 <210> SEQ ID NO: 16
180 <211> LENGTH: 43
181 <212> TYPE: DNA
182 <213> ORGANISM: Erwinia herbicola
184 <400> SEQUENCE: 16
185 aagatctctc gagctaaacg ggacgctgcc aaagaccggc cgc 43
187 <210> SEQ ID NO: 17
188 <211> LENGTH: 23
189 <212> TYPE: DNA
190 <213> ORGANISM: Tobacco mild green mosaic virus
192 <400> SEQUENCE: 17
193 tgtgaaactc gaaaagggttc cgg 23
195 <210> SEQ ID NO: 18
196 <211> LENGTH: 36
197 <212> TYPE: DNA
198 <213> ORGANISM: Tobacco mild green mosaic virus

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200 <400> SEQUENCE: 18
201 cgggggtacct gggccgctac cggcggttag gggagg 36
203 <210> SEQ ID NO: 19
204 <211> LENGTH: 31
205 <212> TYPE: DNA
206 <213> ORGANISM: Ribgrass mosaic virus
208 <400> SEQUENCE: 19
209 tactcgaggt tcataagacc gcggtaggcg g 31
211 <210> SEQ ID NO: 20
212 <211> LENGTH: 36
213 <212> TYPE: DNA
214 <213> ORGANISM: Ribgrass mosaic virus
216 <400> SEQUENCE: 20
217 cgggggtacct gggccctac ccggggttta gggagg 36
219 <210> SEQ ID NO: 21
220 <211> LENGTH: 107
221 <212> TYPE: DNA
222 <213> ORGANISM: N. tabacum
224 <220> FEATURE:
225 <221> NAME/KEY: CDS
226 <222> LOCATION: (21)...(107)
228 <400> SEQUENCE: 21
229 gttttaaata cgtcgagcc atg gct tcc tca gtt ctt tcc tct gca gca gtt 53
230 Met Ala Ser Ser Val Leu Ser Ser Ala Ala Val
231 1 5 10
233 gcc acc cgc agc aat gtt gct caa gct aac atg gtt gca cct ttc act 101
234 Ala Thr Arg Ser Asn Val Ala Gln Ala Asn Met Val Ala Pro Phe Thr
235 15 20 25
237 ggc ctt 107
238 Gly Leu
242 <210> SEQ ID NO: 22
243 <211> LENGTH: 29
244 <212> TYPE: PRT
245 <213> ORGANISM: N. tabacum
247 <400> SEQUENCE: 22
248 Met Ala Ser Ser Val Leu Ser Ser Ala Ala Val Ala Thr Arg Ser Asn
249 1 5 10 15
250 Val Ala Gln Ala Asn Met Val Ala Pro Phe Thr Gly Leu
251 20 25
253 <210> SEQ ID NO: 23
254 <211> LENGTH: 1543
255 <212> TYPE: DNA
256 <213> ORGANISM: Tobacco mild green mosaic virus
258 <400> SEQUENCE: 23
259 ctcgagggttc ataagaccgc ggtaggcgga gcgtttgttt actgtagtat aattaaatat 60
260 ttgtcagata aaaggttggt taaagatttg tttttgttt gactgagtcg ataattgtctt 120
261 acgagcctaa agtttagtgac ttccttgctc ttacgaaaaa ggaggaaatt ttaccaagg 180
262 ctttgacgag attaaagact gtctctatta gtactaagga tggtatatct gtttaaggagt 240
263 ctgagtcctt gtgtgatatt gatttggttag tgaatgtgcc attagataag tataggtatg 300

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|     |                                   |             |             |             |             |              |      |
|-----|-----------------------------------|-------------|-------------|-------------|-------------|--------------|------|
| 264 | tggggtgtttt                       | gggtgttgtt  | ttcaccgggtg | aatggctggt  | accggatttc  | gttaaagggtg  | 360  |
| 265 | gggtaacagt                        | gagcgtgatt  | gacaaaacggc | ttgaaaattc  | cagagagtgc  | ataattggta   | 420  |
| 266 | cgtaccgagc                        | tgctgtaaaag | gacagaaggt  | tccagttcaa  | gctggttcca  | aattacttcg   | 480  |
| 267 | tatccattgc                        | ggatgccaaag | cgaaaaccgt  | ggcaggttca  | tgtagcgaatt | caaaatctga   | 540  |
| 268 | agatcgaagc                        | tggtatggcaa | cctctagctc  | tagagggtgt  | ttctgttgcc  | atggttacta   | 600  |
| 269 | ataacgtggt                        | tggttaaagg  | ttgagggaaa  | aggtcatcgc  | agtgaatgat  | ccgaacgtcg   | 660  |
| 270 | aaggtttcga                        | aggtgtgtgt  | gacgatttcg  | tcgattcggg  | tgctgcattc  | aaggcgattg   | 720  |
| 271 | acagtttcgc                        | aaagaaaaag  | aaaaagattg  | gaggaaggga  | tgtaaataat  | aataagtata   | 780  |
| 272 | gatatagacc                        | ggagagatac  | gccggtcctg  | attcgttaca  | atataaagaa  | gaaaaatggt   | 840  |
| 273 | tacaacatca                        | cgagctcgaa  | tcagtaccag  | tatttcgcag  | cgatgtgggc  | agagcccaca   | 900  |
| 274 | gcgatgctta                        | accagtgctg  | gtctgcgttg  | tcgcaatcgt  | atcaaaactca | ggcggcaaga   | 960  |
| 275 | gatactgtta                        | gacagcagtt  | ctctaaccct  | ctgagtgcga  | ttgtgacacc  | gaaccagcgg   | 1020 |
| 276 | tttccagaaa                        | caggataccg  | ggtgtatatt  | aattcagcag  | ttctaaaacc  | gttgtacgag   | 1080 |
| 277 | tctctcatga                        | agtcctttga  | tactagaaat  | aggatcattg  | aaactgaaga  | agagtcgcgt   | 1140 |
| 278 | ccatcggtt                         | ccgaagtatc  | taatgcaaca  | caacgtgttg  | atgatgcgac  | cgtggccatc   | 1200 |
| 279 | aggagtcaaa                        | ttcagctttt  | gctgaacgag  | ctctccaacg  | gacatggtct  | gatgaacagg   | 1260 |
| 280 | gcagagttcg                        | aggttttatt  | accttgggct  | actgcgcag   | ctacataggc  | gtggtgcaca   | 1320 |
| 281 | cgatagtga                         | tagtgttttt  | ctctccactt  | aaatcgaaaga | gatataacta  | cgggttaatt   | 1380 |
| 282 | ccgcaagggt                        | ggcgtaaacc  | aaattacgca  | atgttttagg  | ttccatttaa  | atcgaacact   | 1440 |
| 283 | gttatttcct                        | ggaacacctg  | ttaacgtacg  | cgtggcggtat | attacagtgg  | gaataactaa   | 1500 |
| 284 | aagtgaaggg                        | ttcgaatcct  | ccctaaccct  | gggtaggggc  | cca         |              | 1543 |
| 286 | <210> SEQ ID NO: 24               |             |             |             |             |              |      |
| 287 | <211> LENGTH: 55                  |             |             |             |             |              |      |
| 288 | <212> TYPE: DNA                   |             |             |             |             |              |      |
| 289 | <213> ORGANISM: rape mosaic virus |             |             |             |             |              |      |
| 291 | <400> SEQUENCE: 24                |             |             |             |             |              |      |
| 292 | gatggcgccct                       | taatacgact  | cactatagtt  | ttatttttgt  | tgcaacaaca  | acaac        | 55   |
| 294 | <210> SEQ ID NO: 25               |             |             |             |             |              |      |
| 295 | <211> LENGTH: 30                  |             |             |             |             |              |      |
| 296 | <212> TYPE: DNA                   |             |             |             |             |              |      |
| 297 | <213> ORGANISM: rape mosaic virus |             |             |             |             |              |      |
| 299 | <400> SEQUENCE: 25                |             |             |             |             |              |      |
| 300 | cttgtgccct                        | tcattgacgag | ctatatcag   |             |             |              | 30   |
| 302 | <210> SEQ ID NO: 26               |             |             |             |             |              |      |
| 303 | <211> LENGTH: 497                 |             |             |             |             |              |      |
| 304 | <212> TYPE: DNA                   |             |             |             |             |              |      |
| 305 | <213> ORGANISM: rape mosaic virus |             |             |             |             |              |      |
| 307 | <400> SEQUENCE: 26                |             |             |             |             |              |      |
| 308 | ccttaatac                         | actcactata  | gttttatttt  | tggtgcaaca  | acaacaacaa  | attacaataa   | 60   |
| 309 | caacaaaaca                        | aatacaaaaca | acaacaacat  | ggcacaattt  | caacaaacag  | taaacatgca   | 120  |
| 310 | aacattgcag                        | gctgcccag   | ggcgcaacag  | cctggtgaat  | gatttagcct  | cacgacgtgt   | 180  |
| 311 | ttatgacaat                        | gctgtcgagg  | agctaaatgc  | acgctcgaga  | cgccctaagg  | ttcattactc   | 240  |
| 312 | caaatcagtg                        | tctacggaac  | atgacgctgt  | tagcttcaaa  | cgcttatccg  | gagtttgaga   | 300  |
| 313 | tttcctttac                        | tcatacccaa  | catgccgtac  | actcccttgc  | gggtggccta  | aggactcttg   | 360  |
| 314 | agtttagagta                       | tctcatgatg  | caagttccgt  | tcggttctct  | gacgtacgac  | atcgggtggtta | 420  |
| 315 | actttgcagc                        | gcaccttttc  | aaaggacgag  | actacgttca  | ctgctgtatg  | ccaaacttgg   | 480  |
| 316 | atgtacgtga                        | tatagct     |             |             |             |              | 497  |
| 318 | <210> SEQ ID NO: 27               |             |             |             |             |              |      |
| 319 | <211> LENGTH: 55                  |             |             |             |             |              |      |

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